CLAIMS

What is claimed is:

1. A seal-assembly for sealing a toner passage in a toner hopper of a toner cartridge used in a dry toner style image forming apparatus, said seal-assembly including:

a pull-strip; and

a seal-insert including a substantially stiff layer sandwiched by a top and a bottom adherent layer whereby said seal-insert includes an open region; and

a bottom release liner adhered under said bottom adherent layer used to protect said bottom adherent layer prior to installation of said seal-assembly; and

a layer-to-be-torn adhered over said top adherent layer of said seal-insert which covers said open region; and

a connecting region proximately located where said pull-strip is attached to said layer-to-be-torn approximately over a right end of said seal-insert; and

whereby pulling on said pull-strip at the using location will cause at least one tear in said layer-to-be-torn, thus releasing a strip over a tear region of said layer-to-be-torn and thereby creating an opening in said layer-to-be-torn and thus allowing a powdered toner to pass through said opening in said layer-to-be-torn and thus allowing the powdered toner to pass through said open region of said seal-insert and thus allowing the powdered toner to pass through the toner passage in the toner hopper.

2. A seal-assembly for sealing a toner passage as in claim 1 whereby said seal-insert is rectangular in shape.

3. A seal-assembly for sealing a toner passage as in claim 1 whereby said substantially stiff layer of said seal-insert includes a plastic layer.

4. A seal-assembly for sealing a toner passage as in claim 1 whereby said substantially stiff layer of said seal-insert includes a cardboard layer.

5. A seal-assembly for sealing a toner passage as in claim 1 whereby said top adherent layer comprises a layer of tape, glue, caulk or adhesive.

6. A seal-assembly for sealing a toner passage as in claim 5 whereby said top adherent layer is comprised of at least one layer of material.

7. A seal-assembly for sealing a toner passage as in claim 1 whereby said bottom adherent layer comprises a layer of tape, glue, caulk or adhesive.

8. A seal-assembly for sealing a toner passage as in claim 7 whereby said bottom adherent layer is comprised of at least one layer of material.

9. A seal-assembly for sealing a toner passage as in claim 1 whereby said pull-strip comprises a free length portion which is unitary with said layer-to-be-torn.

10. A seal-assembly for sealing a toner passage as in claim 1 whereby said pull-strip comprises a free length portion which is a tear-guide.

11. A seal-assembly for sealing a toner passage as in claim 10 whereby said tear-guide adheres to said layer-to-be-torn using a pressure-sensitive tape, adhesive or glue.

12. A seal-assembly for sealing a toner passage as in claim 10 whereby said tear-guide adheres to said layer-to-be-torn using a heat-activated adhesive.

13. A seal-assembly for sealing a toner passage as in claim 10 whereby said tear-guide adheres to said layer-to-be-torn using pressure rollers.

14. A seal-assembly for sealing a toner passage as in claim 10 whereby said tear-guide adheres to said layer-to-be-torn using heat-pressure rollers.

15. A seal-assembly for sealing a toner passage as in claim 10 whereby said tear-guide adheres to said layer-to-be-torn using a heat-press.

16. A seal-assembly for sealing a toner passage as in claim 10 whereby said tear-guide includes more than one layer.

17. A seal-assembly for sealing a toner passage as in claim 16 whereby said tear-guide includes at least one layer of strength and at least one layer of heat-activated adhesive.

18. A seal-assembly for sealing a toner passage as in claim 1 including a short grip portion on a left side of said seal-insert; and

whereby said seal-assembly for sealing a toner passage may be installed such that the installer of said seal-assembly for sealing a toner passage in a toner hopper may apply a pulling force on both said short grip portion and also on said pull-strip simultaneously and thereby manage assembly of said seal-assembly for sealing a toner passage in a toner hopper for ease of installation of said seal-assembly for sealing a toner passage in a toner hopper.

19. A seal-assembly for sealing a toner passage as in claim 1 whereby said seal-assembly for sealing a toner passage in a toner hopper includes at least one positioning stiffener.

20. A seal-assembly for sealing a toner passage as in claim 19 whereby at least one said positioning stiffener includes a portion that protrudes adjacent an edge of a main body portion of said seal-assembly whereby said main body portion includes said seal-insert and said layer-to-be-torn over a portion of said seal-insert.

21. A seal-assembly for sealing a toner passage as in claim 19 whereby at least one said positioning stiffener includes at least one tab that protrudes adjacent an edge of said main body portion of said seal-assembly whereby said main body portion includes said seal-insert and said layer-to-be-torn over a portion of said seal-insert.

22. A seal-assembly for sealing a toner passage as in claim 20 whereby at least one said positioning stiffener includes an external positioning stiffener portion intended to be removed after installation of said seal-assembly for sealing a toner passage in a toner hopper.

23. A seal-assembly for sealing a toner passage as in claim 22 whereby said positioning stiffener portion includes a plastic layer.

24. A seal-assembly for sealing a toner passage as in claim 22 whereby said positioning stiffener portion includes a cardboard layer.

25. A seal-assembly for sealing a toner passage as in claim 22 whereby said positioning stiffener portion includes a metal layer.

26. A seal-assembly for sealing a toner passage as in claim 21 whereby at least one said positioning stiffener includes an external positioning stiffener portion intended to be removed after installation of said seal-assembly for sealing a toner passage in a toner hopper.

27. A seal-assembly for sealing a toner passage as in claim 26 whereby said positioning stiffener portion includes a plastic layer.

28. A seal-assembly for sealing a toner passage as in claim 26 whereby said positioning stiffener portion includes a cardboard layer.

29. A seal-assembly for sealing a toner passage as in claim 26 whereby said positioning stiffener portion includes a metal layer.

30. A seal-assembly for sealing a toner passage as in claim 20 whereby at least one said positioning stiffener includes at least an internal positioning stiffener portion.

31. A seal-assembly for sealing a toner passage as in claim 30 whereby said internal positioning stiffener portion includes said substantially stiff layer.

32. A seal-assembly for sealing a toner passage as in claim 21 whereby at least one said positioning stiffener includes at least an internal positioning stiffener portion.

33. A seal-assembly for sealing a toner passage as in claim 32 whereby said internal positioning stiffener portion includes said substantially stiff layer.

34. A seal-assembly for sealing a toner passage as in claim 20 whereby at least one said positioning stiffener includes an internal positioning stiffener portion and an external positioning stiffener portion whereby said external positioning stiffener portion is to be removed after installation of said seal-assembly.

35. A seal-assembly for sealing a toner passage as in claim 31 whereby at least one said positioning stiffener includes an internal positioning stiffener portion and an external positioning stiffener portion whereby said external positioning stiffener portion is to be removed after installation of said seal-assembly.

36. A seal-assembly for sealing a toner passage as in claim 1 whereby said substantially stiff layer is comprised of at least one layer.

37. A seal-assembly for sealing a toner passage as in claim 36 whereby at least one said substantially stiff layer includes at least one layer that is not stiff.

38. A seal-assembly for sealing a toner passage as in claim 1 whereby said substantially stiff layer includes at least one layer.

39. A seal-assembly for sealing a toner passage as in claim 1 whereby said substantially stiff layer includes more than one layer.

40. A seal-assembly for sealing a toner passage as in claim 1 whereby said bottom release liner comprises a stiff release liner.

41. A seal-assembly for sealing a toner passage as in claim 40 whereby said stiff release liner includes a stiff paper or cardboard.

42. A seal-assembly for sealing a toner passage as in claim 1 whereby said seal-assembly includes conductive material.

43. A seal-assembly for sealing a toner passage as in claim 1 whereby said seal-insert includes conductive material.

44. A seal-assembly for sealing a toner passage as in claim 1 whereby said pull-strip includes conductive material.

45. A seal-assembly for sealing a toner passage as in claim 1 whereby said layer-to-be-torn includes conductive material.

46. A seal-assembly for sealing a toner passage as in claim 1 whereby said seal-insert includes antistatic material.

47. A seal-assembly for sealing a toner passage as in claim 1 whereby said pull-strip includes antistatic material.

48. A seal-assembly for sealing a toner passage as in claim 1 whereby said layer-to-be-torn includes antistatic material.

49. A seal-assembly for sealing a toner passage as in claim 1 whereby said layer-to-be-torn includes a ribbon material that tears substantially straight.

50. A seal-assembly for sealing a toner passage as in claim 1 whereby said layer-to-be-torn includes at least one layer.

51. A seal-assembly for sealing a toner passage as in claim 1 whereby said layer-to-be-torn includes more than one layer.

52. A seal-assembly for sealing a toner passage as in claim 1 whereby said layer-to-be-torn includes a material that includes pre-determined grooves.

53. A seal-assembly for sealing a toner passage as in claim 1 whereby said layer-to-be-torn includes a material that includes pre-determined perforation.

54. A seal-assembly for sealing a toner passage as in claim 52 whereby said pre-determined grooves are at least as long as said seal-insert.

55. A seal-assembly for sealing a toner passage as in claim 52 whereby said pre-determined grooves are pre-cut along said layer-to-be-torn.

56. A seal-assembly for sealing a toner passage as in claim 1 whereby

a first pre-cut and a second pre-cut proximately located in said connecting region, said first and second pre-cuts determining a location of an initial tear of said layer-to-be-torn in a main body portion over said seal-insert.

57. A seal-assembly for sealing a toner passage as in claim 1 whereby said seal-assembly includes adherent layer on top of said layer-to-be-torn.

58. A seal-assembly for sealing a toner passage as in claim 1 whereby said seal-insert includes a foam layer.

59. A seal-assembly for sealing a toner passage as in claim 1 whereby said bottom release liner layer includes an open region in alignment with said open region of said seal-insert.

60. A seal-assembly for sealing a toner passage as in claim 1 whereby said substantially stiff layer adds rigidity to said seal-assembly to ease installation of said seal-assembly.

61. A toner hopper used in an image forming apparatus;

whereby said toner hopper includes a reservoir and a feed roller compartment; and

whereby said reservoir is used to store a powdered toner; and

whereby said feed roller compartment includes a roller used to dispense said powdered toner; and

whereby said toner hopper includes a seal assembly between said reservoir and said feed roller compartment; and

whereby said seal assembly includes a pull-strip; and

a seal-insert including a substantially stiff layer sandwiched by a top and a bottom adherent layer whereby said seal-insert includes an open region; and

a layer-to-be-torn adhered over said top adherent layer of said seal-insert which covers said open region; and

a connecting region proximately located where said pull-strip is attached to said layer-to-be-torn approximately over a right end of said seal-insert; and

whereby pulling on said pull-strip at the using location will cause at least one tear in said layer-to-be-torn, thus releasing a strip over a tear region of said layer-to-be-torn and thereby creating an opening in said layer-to-be-torn and thus allowing said powdered toner to pass through said opening in said layer-to-be-torn and thus allowing said powdered toner to pass through said open region of said seal-insert and thus allowing said powdered toner to pass through said toner passage in said toner hopper.

62. A toner cartridge assembly used in an image forming apparatus;

whereby said toner cartridge assembly includes a toner hopper and a photoreceptor housing; and

whereby said photoreceptor housing includes a photoreceptor, a cleaning blade and a charging device for electrostatically charging said photoreceptor; and

whereby said toner hopper includes a reservoir, a toner passage and a feed roller compartment; and

whereby said reservoir is used to store a powdered toner; and

whereby said feed roller compartment includes a roller used to dispense said powdered toner; and

whereby said toner hopper includes a seal assembly; and

whereby said seal assembly includes a pull-strip; and

a seal-insert including a substantially stiff layer sandwiched by a top and a bottom adherent layer whereby said seal-insert includes an open region; and

a layer-to-be-torn adhered over said top adherent layer of said seal-insert which covers said open region; and

a connecting region proximately located where said pull-strip is attached to said layer-to-be-torn approximately over a right end of said seal-insert; and whereby pulling on said pull-strip at the using location will cause at least one tear in said layer-to-be-torn, thus releasing a strip over a tear region of said layer-to-be-torn and thereby creating an opening in said layer-to-be-torn and thus allowing said powdered toner to pass through said opening in said layer-to-be-torn and thus allowing said powdered toner to pass through said open region of said seal-insert and thus allowing said powdered toner to pass through said toner passage in said toner hopper.

63. An image forming apparatus comprising of a dry toner style printer, copy machine or facsimile machine;

whereby said image forming apparatus contains a toner storage container and a photoreceptor housing; and

whereby said photoreceptor housing includes a photoreceptor, a cleaning blade and a photoreceptor charging device;

whereby said toner storage container includes a storage tank, a toner passage and a feed roller compartment; and

whereby said storage tank includes a seal assembly; and

whereby said seal assembly includes a pull-strip; and

a seal-insert including a substantially stiff layer sandwiched by a top and a bottom adherent layer whereby said seal-insert includes an open region; and

a layer-to-be-torn adhered over said top adherent layer of said seal-insert which covers said open region; and

a connecting region proximately located where said pull-strip is attached to said layer-to-be-torn approximately over a right end of said seal-insert; and whereby pulling on said pull-strip at the using location will cause at least one tear in said layer-to-be-torn, thus releasing a strip over a tear region of said layer-to-be-torn and thereby creating an opening in said layer-to-be-torn and thus allowing a powdered toner to pass through said opening in said layer-to-be-torn and thus allowing said powdered toner to pass through said open region of said seal-insert and thus allowing said powdered toner to pass through said toner passage in said toner storage container.

64. An image forming apparatus comprising of a dry toner style printer image forming apparatus; and

whereby said image forming apparatus includes a toner cartridge assembly and

whereby said toner cartridge assembly includes a toner hopper and a photoreceptor housing; and

whereby said photoreceptor housing includes a photoreceptor, a cleaning blade and a charging device for electrostatically charging said photoreceptor; and

whereby said toner hopper includes a reservoir and a feed roller compartment; and

whereby said reservoir is used to store a powdered toner; and

whereby said feed roller compartment includes a roller used to dispense said powdered toner; and

whereby said toner hopper includes a seal assembly between said reservoir and said feed roller compartment; and

whereby said seal assembly includes a pull-strip; and a seal-insert including a substantially stiff layer sandwiched by a top and a bottom adherent layer whereby said seal-insert includes an open region; and

a layer-to-be-torn adhered over said top adherent layer of said seal-insert which covers said open region; and

a connecting region proximately located where said pull-strip is attached to said layer-to-be-torn approximately over a right end of said seal-insert; and

whereby pulling on said pull-strip at the using location will cause at least one tear in said layer-to-be-torn, thus releasing a strip over a tear region of said layer-to-be-torn and thereby creating an opening in said layer-to-be-torn and thus allowing said powdered toner to pass through said opening in said layer-to-be-torn and thus allowing said powdered toner to pass through said open region of said seal-insert and thus allowing said powdered toner to pass through said toner passage in said toner hopper.

65. A method of manufacturing a device for sealing a toner passage in a toner hopper used in printers, copying machines, facsimile machines, toner cartridges used therein, or any image forming apparatus:

whereby said method of manufacturing the seal-assembly includes the step of manufacturing a pull-strip; and

whereby said method of manufacturing the seal assembly includes manufacturing a seal-insert including a substantially stiff layer sandwiched between a top and a bottom adherent layer and stamping the seal-insert to form an open region; and

a bottom release liner is adhered under the bottom adherent layer; and whereby said method of manufacturing the seal-assembly includes adhering a layer-to-be-torn over the top adherent layer of the seal-insert which covers the open region; and

a connecting region proximately located where the pull-strip is attached to the layer-to-be-torn approximately over a right end of the seal-insert; and

whereby pulling on the pull-strip at the using location will cause at least one tear in the layer-to-be-torn, thus releasing a strip over a tear region of the layer-to-be-torn and thereby creating an opening in the layer-to-be-torn and thus allowing a powdered toner to pass through the opening in the layer-to-be-torn and thus allowing the powdered toner to pass through the open region of the seal-insert and thus allowing the powdered toner to pass through the toner passage in the toner hopper.

66. A method of manufacturing a toner hopper used in an image forming apparatus comprising of a dry toner style printer, copy machine or facsimile machine;

whereby the toner hopper includes a reservoir and a feed roller compartment; and

whereby the reservoir is used to store a powdered toner; and

whereby the feed roller compartment includes a roller used to dispense the powdered toner; and

whereby the toner hopper includes a seal assembly between the reservoir and the feed roller compartment; and

whereby said method includes the steps of manufacturing the seal-assembly and adhering the seal-assembly to the toner hopper; and whereby said method of manufacturing the seal-assembly includes forming a pull-strip; and

whereby said method of manufacturing the seal-assembly includes manufacturing a seal-insert including a substantially stiff layer sandwiched between a top and a bottom adherent layer and stamping the seal-insert to form an open region; and

a bottom release liner adhered under the bottom adherent layer; and

whereby said method of manufacturing the seal-assembly includes adhering a layer-to-be-torn over the top adherent layer of the seal-insert to cover the open region; and

a connecting region is proximately located where the pull-strip is attached to the layer-to-be-torn approximately over a right end of the seal-insert; and

whereby pulling on the pull-strip at the using location will cause at least one tear in the layer-to-be-torn, thus releasing a strip over a tear region of the layer-to-be-torn and thereby creating an opening in the layer-to-be-torn and thus allowing the powdered toner to pass through the opening in the layer-to-be-torn and thus allowing the powdered toner to pass through the open region of the seal-insert and thus allowing the powdered toner to pass through the toner passage in the toner hopper.

67. A method of manufacturing a toner cartridge assembly used in an image forming apparatus;

whereby the toner cartridge assembly includes a toner hopper and a photoreceptor housing; and

whereby the photoreceptor housing includes a photoreceptor, a cleaning blade and a charging device for electrostatically charging the photoreceptor; and whereby the toner hopper includes a reservoir, a toner passage and a feed roller compartment; and

whereby the reservoir is used to store a powdered toner; and

whereby the feed roller compartment includes a feed roller used to dispense the powdered toner; and

whereby the toner hopper includes a seal assembly between the reservoir and the feed roller compartment; and

whereby said method includes the step of manufacturing the seal assembly; and

whereby said method includes the step of installing and manufacturing a seal assembly; and

whereby said method of manufacturing the seal assembly includes the step of manufacturing a pull-strip; and

whereby said method of manufacturing the seal assembly includes manufacturing a seal-insert including a substantially stiff layer sandwiched between a top and a bottom adherent layer and stamping the seal-insert to form an open region; and

a bottom release liner adhered under the bottom adherent layer; and

whereby said method of manufacturing the seal assembly includes the step of adhering a layer-to-be-torn over the top adherent layer of the seal-insert to cover the open region; and a connecting region proximately located where the pull-strip is attached to the layer-to-be-torn approximately over a right end of the seal-insert; and

whereby pulling on the pull-strip at the using location will cause at least one tear in the layer-to-be-torn, thus releasing a strip over a tear region of the layer-to-be-torn and thereby creating an opening in the layer-to-be-torn and thus allowing the powdered toner to pass through the opening in the layer-to-be-torn and thus allowing the powdered toner to pass through the open region of the seal-insert and thus allowing the powdered toner to pass through the toner passage in the toner hopper.

68. A method of remanufacturing a toner cartridge assembly used in an image forming apparatus;

whereby the toner cartridge includes a toner hopper and a photoreceptor housing; and

whereby the photoreceptor housing including a photoreceptor, a cleaning blade and a charging device for electrostatically charging the photoreceptor; and

whereby the toner hopper includes a reservoir, a toner passage and a feed roller compartment; and

whereby the reservoir is used to store a powdered toner; and

whereby the feed roller compartment includes a roller used to dispense the powdered toner; and

whereby said method includes the step of installing a seal assembly between the reservoir and the feed roller compartment of the toner hopper; and

whereby said method includes the step of manufacturing the seal assembly; and whereby said method includes the step of making a pull-strip; and

whereby said method of manufacturing the seal assembly includes manufacturing a seal-insert including a substantially stiff layer sandwiched between a top and a bottom adherent layer and stamping the seal-insert to form an open region; and

a bottom release liner adhered under the bottom adherent layer; and

whereby said method includes the step of adhering a layer-to-be-torn over the top adherent layer of the seal-insert to cover the open region; and

a connecting region proximately located where the pull-strip is attached to the layer-to-be-torn approximately over a right end of the seal-insert; and

whereby pulling on the pull-strip at the using location will cause at least one tear in the layer-to-be-torn, thus releasing a strip over a tear region of the layer-to-be-torn and thereby creating an opening in the layer-to-be-torn and thus allowing the powdered toner to pass through the opening in the layer-to-be-torn and thus allowing the powdered toner to pass through the open region of the seal-insert and thus allowing the powdered toner to pass through the toner passage in the toner hopper.

69. A method of manufacturing a device for sealing a toner passage in a toner hopper used in printers, copying machines, facsimile machines, toner cartridges used therein, or any image forming apparatus:

whereby said method includes the step of manufacturing a pull-strip; and

whereby said method includes the step of manufacturing a seal-insert including stamping an open region; and whereby said method includes the step whereby a bottom release liner is adhered under a bottom adherent layer of the seal-insert; and

whereby said method includes the step of manufacturing a layer-to-be-torn and adhering the layer-to-be-torn over a top adherent layer of the seal-insert in a way to cover the open region; and

whereby there is a connecting region proximately located where the pull-strip is attached to the layer-to-be-torn approximately over a right end of the seal-insert; and

whereby said method includes the step of installing the seal-assembly over the toner passage whereby the installer of the seal-assembly for sealing the toner passage in the toner hopper simultaneously applies a pulling force on both the short grip portion and also on the pull-strip simultaneously, pulling the seal-assembly taut while installing the seal-assembly and thereby simplifying assembly of the seal-assembly into the toner passage in the toner hopper for ease of installation of the seal-assembly in the toner passage in the toner hopper; and

whereby pulling on the pull-strip at the using location will cause at least one tear in the layer-to-be-torn, thus releasing a strip over a tear region of the layer-to-be-torn and thereby creating an opening in the layer-to-be-torn and thus allowing a powdered toner to pass through the opening in the layer-to-be-torn and thus allowing the powdered toner to pass through the open region of the seal-insert and thus allowing the powdered toner to pass through the toner passage in the toner hopper.

70. A seal-assembly for sealing a toner passage in a toner hopper of a toner cartridge used in a dry toner style image forming apparatus, said seal-assembly including:

a pull-strip; and

a seal-insert including a substantially stiff layer sandwiched by a top and a bottom adherent layer whereby said seal-insert includes an open region; and

a bottom release liner adhered under said bottom adherent layer used to protect said bottom adherent layer prior to installation of said seal-assembly; and

a layer-to-be-torn adhered over said top adherent layer of said seal-insert which covers said open region; and

a stiff liner layer adhered to said bottom adherent layer of said seal-insert; and

a connecting region proximately located where said pull-strip is attached to said layer-to-be-torn approximately over a right end of said seal-insert; and

whereby pulling on said pull-strip at the using location will cause at least one tear in said layer-to-be-torn, thus releasing a strip over a tear region of said layer-to-be-torn and thereby creating an opening in said layer-to-be-torn and thus allowing a powdered toner to pass through said opening in said layer-to-be-torn and thus allowing the powdered toner to pass through said open region of said seal-insert and thus allowing the powdered toner to pass through the toner passage in the toner hopper.

71. A seal-assembly for sealing a toner passage as in claim 71 whereby said seal-assembly for sealing a toner passage in a toner hopper includes at least one positioning stiffener.

72. A seal-assembly for sealing a toner passage as in claim 71 whereby at least one said positioning stiffener includes a portion that protrudes adjacent an edge of a main body portion of said seal-assembly whereby said main body portion includes said seal-insert and said layer-to-be-torn over a portion of said seal-insert.

73. A seal-assembly for sealing a toner passage as in claim 71 whereby at least one said positioning stiffener includes at least one tab that protrudes adjacent an edge of said main body portion of said seal-assembly whereby said main body

portion includes said seal-insert and said layer-to-be-torn over a portion of said seal-insert.

74. A seal-assembly for sealing a toner passage as in claim 72 whereby at least one said positioning stiffener includes an external positioning stiffener portion intended to be removed after installation of said seal-assembly for sealing a toner passage in a toner hopper.

75. A seal-assembly for sealing a toner passage as in claim 74 whereby said positioning stiffener portion includes a plastic layer.

76. A seal-assembly for sealing a toner passage as in claim 74 whereby said positioning stiffener portion includes a cardboard layer.

77. A seal-assembly for sealing a toner passage as in claim 74 whereby said positioning stiffener portion includes a metal layer.

78. A seal-assembly for sealing a toner passage as in claim 73 whereby at least one said positioning stiffener includes an external positioning stiffener portion intended to be removed after installation of said seal-assembly for sealing a toner passage in a toner hopper.

79. A seal-assembly for sealing a toner passage as in claim 78 whereby said positioning stiffener portion includes a plastic layer.

80. A seal-assembly for sealing a toner passage as in claim 78 whereby said positioning stiffener portion includes a cardboard layer.

81. A seal-assembly for sealing a toner passage as in claim 78 whereby said positioning stiffener portion includes a metal layer.

82. A seal-assembly for sealing a toner passage as in claim 72 whereby at least one said positioning stiffener includes at least an internal positioning stiffener portion.

83. A seal-assembly for sealing a toner passage as in claim 82 whereby said internal positioning stiffener portion includes said substantially stiff layer.

84. A seal-assembly for sealing a toner passage as in claim 73 whereby at least one said positioning stiffener includes at least an internal positioning stiffener portion.

85. A seal-assembly for sealing a toner passage as in claim 84 whereby said internal positioning stiffener portion includes said substantially stiff layer.

86. A seal-assembly for sealing a toner passage as in claim 72 whereby at least one said positioning stiffener includes an internal positioning stiffener portion and an external positioning stiffener portion whereby said external positioning stiffener portion is to be removed after installation of said seal-assembly.

87. A seal-assembly for sealing a toner passage as in claim 83 whereby at least one said positioning stiffener includes an internal positioning stiffener portion and an external positioning stiffener portion whereby said external positioning stiffener portion is to be removed after installation of said seal-assembly.